Emergency Nurses Association Position Statement: Crowding in the Emergency Department

Author: Emergency Nurses Association

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Statement of problem

Crowding in our nation's emergency departments (EDs) is of increasing concern to health care professionals and health care consumers alike. Although the issue of ED crowding in the United States has appeared in the emergency health care literature since the early 1990s, it has received greater coverage during the last few years, capturing the attention of many Americans and policymakers.[1-4] ED crowding can be described as "a situation in which the identified need for emergency services outstrips available resources in the emergency department. This situation occurs in hospital emergency departments when there are more patients than staffed emergency department treatment beds and wait times exceed a reasonable period."[5] When crowding occurs, patients are often placed in hallways and other nontreatment areas to be monitored until ED treatment beds or staffed hospital inpatient beds become available.[6] In addition, crowding may contribute to an inability to triage and treat patients in a timely manner, as well as increased rates of patients leaving the ED without being seen.[4,6] As a result of crowding, hospitals often implement ambulance diversion measures, which means ambulances that would otherwise bring patients to the facility's ED are directed to nearby EDs instead.[4] In many cases, ambulance diversion may be an ineffective response to crowding.[5-9] For example, when one hospital goes on diversion, other area hospitals may begin diverting ambulances as well, potentially resulting in ED crowding throughout the community.[8,9]

In response to growing national concern over ED crowding, the US General Accounting Office (GAO) conducted a study of hospital EDs in metropolitan statistical areas to investigate the level of crowding experienced, the

factors contributing to crowding, and the strategies used to address crowding.[4] Although specific measures to define when an ED is crowded are lacking, the GAO identified three indicators that may signify ED crowding: 1) number of hours a hospital is on diversion; 2) proportion of patients boarded in the ED awaiting staffed ED or inpatient treatment beds, as well as length of time they are held in such status; and 3) proportion of patients who leave the ED before receiving a medical evaluation.

Results of the GAO survey indicated that crowding was experienced to some degree in most EDs but was more prevalent in certain types of communities. These communities were generally more populated (i.e., population of 2.5 million or more), with recent population growth and greater percentages of uninsured individuals.[4] Although this survey was conducted with EDs in large metropolitan areas, concerns and problems regarding ED crowding exist in communities of all types and sizes.[5,10-12] In a national study conducted by the American Hospital Association on hospital ED capacity, 62% of responding hospital EDs reported being at or over operating capacity.[11] Hospitals participating in the survey were distributed throughout the United States and included urban, rural, teaching, and nonteaching hospitals.[11]

The problem of ED crowding is not confined to the ED. Although the ED is particularly susceptible to the effects of crowding, the causes of crowding often originate outside of the ED. Therefore, crowding is considered a systems issue, which can be examined at department and institution levels, as well as at local, regional, and national levels.[3,4,6,13-15] A systems model has been used to help researchers, administrators, and policymakers understand and address ED and hospital crowding.[16] The systems model involves the interdependent concepts of input, throughput, and output.[16] Analyzing the movement of patients through the hospital system, or "patient flow," helps identify the causes of crowding, such as bottlenecks and surges in patient flow, as well as approaches to mitigate the effects of crowding.[15] Factors such as demand for ED services (input); workload, care processes, and resource use (throughput); and ability to move ED patients to the next disposition (output) have a strong potential to affect access to emergency care, timeliness and quality of care, patient safety, and patient outcomes.[6,16,17]

The Joint Commission on Accreditation of Healthcare Organizations (JCAHO) developed a standard that focuses on patient flow for the purpose of addressing ED crowding from a systems perspective.[18] The standard, "Managing Patient Flow," is a leadership standard that requires organizational leaders, including medical and nursing leaders, to improve the movement of patients throughout the hospital.[18,19] To achieve this standard, leadership is expected to identify processes that affect patient flow "from the time the patient arrives, through admitting, patient assessment and treatment, and discharge."[18] With this information, organizations can develop and implement plans to address patient flow inefficiencies.[18] To date, rigorous research on the effects of ED crowding is minimal, but there is concern that crowding may result in reduced quality of patient care and increased risks to patient safety.[4,5,9,14,20-22] Studies have linked crowding to prolonged wait times, patients leaving the ED before being medically evaluated, inpatients being boarded in the ED, and ambulance diversion.[4,9,21,23] Consequences of these circumstances may lead to unpleasant care environments, lack of patient privacy, patient dissatisfaction, prolonged patient pain and suffering, poor clinical outcomes, emergency care provider stress and dissatisfaction, increased potential for errors, and increased liability risks.[5,8,14,20-22]

The factors contributing to ED crowding are numerous and varied and have been well documented in the literature. The root causes of ED crowding are imbedded in the crisis of health care in the United States, requiring solutions that may fall outside of the ED's control.[4,5] Although impossible or difficult to change, the demographic characteristics of the US population and the utilization trends for hospitals and EDs have a strong influence on ED crowding. These factors correspond to issues of input. According to the Centers for Disease Control and Prevention (CDC), there were nearly 114 million visits to US EDs in 2003, an increase of 26% from the 90 million visits reported a decade earlier.[24] Despite this increase in annual visits, the number of EDs decreased by approximately 12% during the same period.[24] Additionally, hospital closures have been cited as contributing to increased demand and ED crowding at open facilities.[4]

The US population is growing and life expectancies are increasing, leading to more people living longer with

complex and chronic debilitating diseases, such as diabetes, cancer, and renal failure.[8,25,26] High patient acuity has been cited as a significant contributing factor to ED crowding,[10,27] and the CDC reports that half (50.4%) of all ED visits in 2003 were categorized as emergent or urgent.[24] In addition, many US citizens lack health insurance or are underinsured, which limits their ability to access primary health care and dental care on a regular basis.[20,26] Emergency departments act as our nation's health care safety net, and many vulnerable populations, such as the uninsured, the mentally ill, the poor, the elderly, and the chronically ill, rely on EDs as their primary source of health care.[20,26,28] Privately and publicly insured Americans account for increasing ED use as well.[24,29] Some communities are experiencing reduced access to primary care providers, which may result in increased numbers of patients using the ED for primary care.[5,20] In fact, the privately insured population comprised the largest group of individuals visiting EDs in 2003.[24] In addition, some individuals may seek care in EDs because they perceive increased access to technology, diagnostic resources, and specialists that may not be readily available in the community.[8,16]

Increases in patient flow into the ED also are due in part to the Emergency Medical Treatment and Labor Act (EMTALA).[5,20,21] The ED is the only part of the health care system that is mandated by EMTALA to treat all persons seeking emergency care, regardless of their ability to pay.[30] Yet, this legislation did not provide for the funding necessary to support hospitals and EDs in their efforts to carry out the mandate.[5,20] In addition, declining reimbursements by Medicare, Medicaid, and other payers, as well as overall increasing operating costs for hospitals, have contributed to the current deficit in hospital resources and insufficient capacity to care for patients.[5,25]

Issues of reduced resources, including staffing, affect the efficiency of patient flow through the ED, or throughput.[16] Shortages of qualified hospital and ED staff play a considerable role in the crisis of ED crowding, with one of the most significant being nursing.[16,20] The nursing shortage is compounded by an aging workforce, a lack of educational programs, and a lack of qualified faculty.[20,31-33] In addition to inadequate nurse staffing, there are national shortages of other health care providers, including physicians, on-call specialists, and support staff.[5,20,21,25] Other factors that affect throughput include the physical space and layout of the ED, staffing ratios, delays in ancillary services, and quality of documentation and communications systems.[16,20]

One of the most common factors cited in the literature as contributing to ED crowding is the lack of staffed inpatient treatment beds for ED patients for whom a decision to admit has been made.[3-5,10,16,20,21,27] This factor affects throughput as well as output, leading to overall inefficient patient flow and disposition of ED patients. This inability to move patients to inpatient beds leads to boarding patients in the ED, which often occurs in hallways.[4-6,20] While boarded, these potentially critical or high-risk patients continue to require the care of ED personnel, as well as ED resources and space.[6,20] Inpatient beds may be physically lacking, unavailable, or inadequately staffed for reasons such as delays in discharging hospitalized patients, delays in cleaning beds after patient discharge, inadequate nurse to patient ratios, or low nurse staffing due to the nursing shortage.[16]

According to the GAO report on ED crowding, the primary reasons for inadequate inpatient bed availability include "(1) financial pressures leading to limited hospital capacity to meet periodic spikes in demand for inpatient beds and (2) competition between admissions from the ED and scheduled admissions such as surgery patients, who are generally considered to be more profitable."[4] In fact, less than one third of the hospitals that responded to the GAO survey indicated that they had cancelled elective procedures in an effort to avoid implementing diversion measures.[4] Issues such as delays in discharging patients and elective admissions versus ED patient admissions may lead to unnecessary variability in patient demand and patient flow inefficiencies.[34]

To address the causes of ED crowding and reduce or eliminate its presence in our nation's EDs and hospitals, several operational and policy changes are necessary. Optimizing patient flow is a solution for improving operational efficiency of patient throughput and output.[15] Although the challenges of ED crowding may be similar between hospitals, solutions may vary depending on each institution's culture and resources.[15] The Urgent Matters program, a national initiative of The Robert Wood Johnson Foundation, worked with US hospitals to address solutions to ED crowding.[15] The program identified several

strategies for improving operational efficiency and patient flow, including the following[15]:

- Establishing a patient flow manager responsible for ensuring timely and appropriate transfer of ED patients to inpatient beds;
- Developing more efficient triage and registration processes to reduce patient wait times;
- Redesigning discharge processes to facilitate timely discharge;
- Implementing discharge holding units for discharged inpatients who are waiting for transportation home, medications, or education;
- Establishing new protocols and monitoring systems to measure and assess hospital operating capacity in an effort to alert when the hospital is reaching maximum capacity or the need to go on diversion; and
- Creating a community-wide diversion plan that involves all local hospitals and emergency medical services.

Smoothing variability in the operating room schedule by scheduling elective surgeries more evenly throughout the week may improve patient flow throughout the hospital, including more even utilization of ICU beds and the ability to better accommodate ED patient admissions, surgery, and intensive care.[25,34] Other strategies described in the literature for facilitating the flow of patients include implementing patient tracking systems, fast-track units, observation units, and new emphasis on discharge planning to facilitate bed turnover.[5,21,25] In addition, many strategies have been proposed to more effectively manage crowding,[4,5,21,35] such as the movement of ED patients to the floors they have been admitted to instead of boarding them in the ED.[25]

The success of strategies to address operational inefficiencies depends on the buy-in and commitment of hospital leadership and staff. Continuous involvement by strong and dedicated leaders is needed to facilitate and maintain changes that improve the efficient and effective flow of patients throughout the hospital system.[3,19]

Policy change to eliminate ED crowding and ensure safe and effective emergency care necessitates long-term goals that require collaborative efforts among regulatory agencies, state and federal legislators, health care policymakers, hospitals, health care providers, community leaders, and others.[3,5] Long-term goals for policy change may include appropriate reimbursement to health care facilities and providers, health care coverage for all Americans, changes to improve the nursing work environment and increase nurse recruitment and retention, and elimination of boarding and ambulance diversion.[3,5,20]

Association position

It is the position of ENA that:

1. All people are entitled to timely and appropriate access to safe and effective health care.
2. Crowding is a systems issue that results from increased input as well as inefficient patient flow throughout the hospital. Initiatives to reduce and eliminate factors that contribute to crowding must have a broad focus and should address both operational and policy issues on a systems level.
3. Emergency nurses should be involved in multidisciplinary research to develop new strategies that optimize patient flow and improve patient admission, transfer, and discharge processes throughout the hospital system.
4. Institutional leaders, including nurses, physicians, and administrators, must be committed and involved in implementing patient flow and other initiatives to improve hospital and ED capacity in an effort to eliminate ED crowding and ensure safe, quality patient care.
5. The ED must work with and receive support from all components of the health care system to improve the efficient disposition of emergency patients.
6. Emergency health care providers must continue to deliver safe, quality patient care regardless of departmental crowding.
7. Collaborative research by emergency nurses and physicians is needed to develop and implement new solutions for the ED to both prevent and manage ED crowding.
8. Institutions must allocate sufficient resources, including appropriate nurse staffing, to ensure the delivery of safe and effective patient care.
9. Effective strategies for the recruitment, retention, and continuing education of registered nurses working in

EDs is critical for providing safe, efficient, quality care, especially during crisis situations when the ED is crowded and functioning above capacity.

10. New strategies to increase the numbers of individuals pursuing nursing careers, as well as initiatives to increase qualified nursing faculty, are vital to addressing the nursing shortage.[33]
11. Professional and public awareness programs as well as legislative efforts are needed to reduce visits to the ED by (1) increasing access to primary care providers in the community and teaching when and how to access emergency care; (2) reducing the numbers of uninsured and underinsured; (3) reducing trauma caused by preventable injuries, violence, and substance abuse; and (4) improving prevention, wellness, and disease management efforts.[36]

Rationale

Emergency department crowding is a hospital-wide problem caused by factors that extend far beyond the institution itself. When ED crowding occurs, the number of patients in need of care outweighs the availability of resources, potentially resulting in diminished quality and safety of patient care and increased stress and dissatisfaction of staff. Efforts to examine issues of input, throughput, and output in order to optimize patient flow throughout the hospital system are vital for addressing factors that lead to ED crowding. Therefore, it is imperative that institutions identify and implement best practices for addressing hospital and ED crowding on a systems level.

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